March 24, 2016

Dear Good People;

Recently I had the privilege of attending the Water Efficiency Board Meeting in San Diego. It was an honor to meet so many people who have documented different approaches to water efficiency in California. Some things have worked; other approaches have proven less than desired results.

I chose to write so you would have boots-on-the-ground feedback from a landscape contractor whose focus is on water conservation through maximum sprinkler efficiency. "We make every drop count!" The feedback I have, directly affects some of the proposals for law and how they might actually work or not work well for the homeowners of California. I have grave concerns for the not-to-be-sold-in-California idea. Some people who have low pressure already, cannot afford to reduce their pressure even more. It would make some sprinklers dribble instead of spray. The PSR sprinkler body is one of such items. They limit pressure to 30 PSI. All of the low-flow sprinkler heads that are rebated from all the water districts operated at 45 PSI up to 55 PSI including all rotors which can operate up to 65 PSI. By limiting all pressure to 30 PSI, you are in effect, nullifying the value/effectiveness of the very nozzles you are rebating. Please see my attached pages from the *Rainbird* and *Hunter* specifications.

If there was something that should not be sold in California, I would recommend the obsolete, atomizing, spray nozzles developed for 30 PSI in 1960. They are not designed for the new pressure. They were designed optimally for 30 PSI. This will also force retailers to give more availability to water-efficient nozzles.

The next recommendation is Section 5 of the home inspectors' instructions on what to inspect. Irrigation clocks have been around since 1970(?). Dozens of types are available. Many of the companies who have made them either do not exist anymore, and/or have been redesigned, or were purchased by larger companies like *Toro, Hunter*, or *Rainbird*. Their operation manuals do not exist anymore. As well, there are myriads of new irrigation clocks, run only by internet access like those developed by *Rachio* [1] sold at Home Depot. Homeowner's internet access is required along with a code. These would certainly not be available to any home inspector. The primary downfall of these internet clocks is that they have no maintenance access panel!

On the same note, many clocks do not work and therefore cannot be tested by anybody. They simply need to be replaced as repair is not possible. To expect a home inspector to go through each station of a clock to discover what its particular needs are, is unrealistic. Some clocks work on some stations and fail to work on others. Sometimes the problem is in the wiring and not in the clock at all, with no signals reaching the solenoid. In many cases, the solenoid is bad. This is an intense investigation and too much to ask of someone who is not a professional in that field. A better idea is to simply have the home inspector observe and note obvious external leaks like at the anti-siphon valve and the isolation valve,[2]

and if water is running onto the sidewalks. If water is running across the sidewalk, the anti-siphon valve or the inline valve is leaking internally. These would be simple observations saving millions of gallons of water with simple repairs. Repair upon discovery is the solution. No home should be sold in California with obvious leaks that need repair. These repairs can be done by any local plumbing company or qualified landscape contractor.

Additionally, experience with the Zero-Scape, inclusive of $3 million of incentives, have proven unsuccessful at best. Curb-side appeal is usually lost along with the cost benefit analysis. The added need for a landscape architect to an already expensive process, de-incentivizes the lion-share number of people who might have considered Zero-Scape. Zero-Scaping is very open-ended and everybody has their opinion of what is attractive. Before this trend, it was just lawn. That was easy to manage from a code enforcement basis.

A rebate program could prove very beneficial for low-flow heads and gear-driven “rotors” which offer the virtually the same GPM as the “rotators”. The cost of “gravel for grass” is not a viable option. Research has shown, $2000 per acre foot will bankrupt any grant in an already delicately balanced water agency budget. Instead of offering $1500 for Zero-Scape (which studies have shown to be ineffective) those rebates could be ratcheted into smaller rebates – like from $600-800 as an incentive to have sprinkler efficient upgrades installed. This would walk out what research proves. The results would be broader participation with more water savings in a shorter amount of time. All this without a need for a permit, architect, or an inspection. It would show up on the homeowners’ annual water use, and make a big difference in water conservation efforts.

Having yards that look good and are water efficient are very do-able. We do it every day. To date, our very small company saved at least 20 acre feet of water in the Sacramento area in 2015! By looking at the whole system and giving people options to conserve water and automate the system, most homeowners are good with the cost it takes to upgrade and save 50-80% on their landscape water use.

Sincerely,

Richard Covert
Owner
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Footnotes:

1 – A Picture of a *Rachio* clock

Access is with the phone or a computer using the connected home service.

2 – An isolation valve is a valve designed to separate the irrigation water from the household water. If there is a leak in the landscape irrigation, the isolation valve can turn it off while the house maintains water.